SUMMARY OF THE 2020 KYTC ***NOISE ANALYSIS AND ABATEMENT POLICY***

Changes to 2020 update to KYTC's *Noise Analysis and Abatement Policy* include:

1) **FORMATTING**. The formatting, writing, and flow of the document was modified to better reflect the process of a noise analysis and to provide better emphasis of key guidance aspects.

2) **DEFINITIONS.** Definitions were added for *Receivers* and *Sound Attenuation*.

3) **SCREENING TOOL.** A discussion of the new *Noise Impact Screening Tool* was added to the policy and a copy of the tool was included in Appendix B.

4) **STUDY AREA.** The policy maintains 500 feet from the proposed edge of pavement as the study area. However, it adds that if modeled impacts are demonstrated at 500 feet, the study area shall be expanded to 800 feet. This change was is also reflected in the description and calculations for *Equivalent Residents*.

5) **ACTIVITY CATEGORY A.** Additional details were added to this Activity Category description to explain that the designation may occur on a site-basis rather than the whole property.

6) **RECEPTORS.**

    a. ***Multifamily Dwellings***. The policy provided additional clarity for the analysis of multifamily dwellings with multiple floors.

    b. ***Grouping.*** Additional guidance was provided regarding the grouping of receptors by determining a single receptor to be representative of a small group. Grouping may occur to identify project impacts. However, the individual receptors shall be modeled for all abatement analysis.

7) **CONDUCTING NOISE LEVEL MEASUREMENTS.**

    a. ***Microphone Height.*** A requirement for the microphone height to be set at five (5) feet above the ground was added to the policy.

    b. ***Measurement Time***. The minimum length of time for measurements was increased to 15 minutes. This change will allow for better representation of sound, particularly in rural areas.

    c. ***Worst Noise Hour.*** The minimum length of time for measurements was increased to 15 minutes.

8) **ACOUSTIC FEASIBILITY**. The policy now outlines that a 115-foot radius around an impacted receptor should be used to determine if a receptor is considered isolated and a proposed barrier wall cannot meet the acoustic feasibility requirement of providing a minimum 5 dB(A) reduction for at least three (3) impacted receptors. If there are not at least two additional impacted receptors within the 115-foot radius, the impacted receptor is considered isolated and KYTC's *Acoustic Feasibility* criterion cannot be met. A statement of likelihood in the NEPA document should identify that noise abatement at that location is not feasible. If there are two additional impacted receptors within that distance, then a barrier analysis should be performed, and the results included in the *Traffic Noise Impact Analysis* document.

9) **COST REASONABLENESS**.

   a. ***Barrier Systems.*** The updated policy revises the guidance to provide clarity on barrier systems and when to evaluate them as a group for feasibility and reasonableness.

   b. ***Other Reasonableness Considerations.*** The updated policy removes the adjustment to the cost of barrier wall calculation for benefited receptors where the predicted noise level exceeds the *Noise Abatement Criteria (NAC)* AND the difference between the predicted noise level and the No Build condition exceeds 10 dB(A). **As a result of this change, the No Build Analysis is no longer required for future analysis**.

10) **DOCUMENTATION AND REPORTING**.

   a. ***Noise Impact Screening Tool.*** The policy outlines the documentation required for projects cleared by KYTC through the Noise Impact Screening Tool.

   b. ***Feasible and Reasonable Barrier Walls.*** Additional information is required for proposed barrier walls that are found to feasible and meet the reasonableness cost-effectiveness and design goal criterion. For these proposed barrier walls, the *Traffic Noise Impact Analysis* document should include exhibit(s) to show the barrier location and lengths in relation to the proposed facility and the receptors as well as a barrier descriptions table, including coordinates of the wall segments, bottom elevations and top elevations should also be provided for these proposed barrier walls.

11) **APPENDICES**.

a. ***Appendix A – Typical Noise Analysis Flowchart.*** A flowchart of the typical noise analysis process was added to the policy.

b. ***Appendix B – Traffic Noise Impact Screening Tool.*** This includes a discussion of the processes and goal of each step within the screening tool, as well as a copy of the screening tool form.

c. ***Appendix C – The Traffic Noise Abatement Calculation Guide.*** This guide, which was previously a separate document from this policy, was incorporated as an appendix in this updated policy. Minor updates to this guide were also made to reflect changes in the policy and for additional clarity.